

# THE MINERAL INDUSTRY OF ESTONIA

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Estonia's mineral industry consisted primarily of mining oil shale, peat, and industrial minerals including clays, limestone, and sand and gravel; phosphate mining in Estonia had ceased because of environmental concerns. In 1996, mining and quarrying accounted for 1.6% of the country's gross domestic product (Bank of Estonia, 1997). Although Estonia was not a major mineral producer, it was a major transshipper of mineral products produced in Russia.

In 1996, Estonia recorded a 3% increase in gross domestic product compared with that of 1995, continuing the trend of increasing output that began in 1995 (Summary of World Broadcasts, 1997a). Industrial production reportedly increased by 1.3% compared with 1995 (Summary of World Broadcasts, 1997b). The port of Tallinn handled 40% more cargo in 1996 than in 1995 with Russian products accounting for most of the total volume of 14 million metric tons (Mt), of which 5 Mt was oil products. Besides oil products, the other main transit goods in 1996 were metals, timber, and fertilizers (Interfax Petroleum Report, 1997).

Estonia was in the process of completing the privatization of some of its largest state enterprises including the Estonian Energy Co., the Tallinn Port, and the Estonian Shipping Line with bidding open to foreign firms (Ekonomika I Zhizn, 1996). The Estonian Privatization Agency in December decided to sell an additional 29.33% stake in the national gas distribution monopoly Eesti Gaas. Reportedly, 12.33% of the company will be offered to the public. Another 17% will be sold to existing shareholders Gazprom of Russia and Ruhrgas of Germany. The Estonian Government currently owns 39.3% of Eesti Gaas. Gazprom and Ruhrgas own, respectively, 30% and 15%. Investment funds and small investors own respectively 10% and 5.7% (Interfax Daily Business Report, 1996).

Estonia's major mining industry is its oil shale industry. The oil shale reserves are located in the northeastern part of the country. The organic matter content of the oil shale averages from 35% to 46%, making it one of the highest grade oil shales in the world. Owing to a lack of other exploitable fuel resources in the region, oil shale has remained a major fuel source in Estonia. About 80% of mined oil shale is consumed at electric powerplants. In 1996, the country reportedly was taking initial steps towards privatizing the oil shale industry.

Oil shale production peaked in 1980 at 31 Mt, but output has stabilized at a level of from 14 to 15 million metric tons per year (Mt/yr) in the post-Soviet period. Mining is conducted at six underground mines and three open pits. Oil shale provides about 65% of Estonia's energy requirements, and the country has estimated reserves of 4 billion tons. Reserves at present

mining operations are deemed adequate for about 20 years, although some mines will be depleted earlier. Owing to a lack of investment funds, no new oil shale mines are planned to be developed in the coming decade. However, there are plans to develop several small auxiliary open pits at the boundaries of old mine fields. The technical modernization of mining operations also has started at some mines (V. Viilup and V. Tohver, ESK, unpublished data).

Although Estonia had ceased mining phosphate rock at its Maardu deposit because of environmental concerns, the country still continued to produce phosphate fertilizer at the Estonsfosforit enterprise at the port of Maardu. Estonsfosforit has the capacity to produce 600,000 metric tons per year (t/yr) of single superphosphate (SSP). It now uses apatite concentrate imported from the Kola Peninsula in Russia as raw material. Production had fallen from about 120,000 tons in 1990 to only 7,000 tons in 1995.

Estonsfosforit had been sold to the Russian fertilizer producer, the Quant Corporation. Quant's main interest in acquiring Estonsfosforit reportedly was acquiring its fertilizer handling terminal at Maardu with its capacity to handle several hundreds of thousands of tons per year of fertilizer and with storage capacity for 25,000 to 40,000 tons of bulk material. Quant reportedly plans to renovate and expand capacity at the terminal and also to renovate the fertilizer plant. In addition, it was announced that the Tallinn Port Authority was planning to build a bulk terminal at Muuga to handle up to 1.5 Mt/yr of potash and other fertilizer shipments from Belarus and Russia (Phosphorus and Potassium, 1996).

The Government of Estonia in January 1997 sold 65% of the shares in Silmet, a state-owned rare metals plant in the town of Sillamae, at an investment tender. Ephag, an Estonian based company won the tender. Ephag was established to purchase Silmet. Ephag is owned both by Estonia's Magnum Grupp, which also runs a brewery in Tartu and a chemical and pharmaceuticals plant in Tallinn, and by a private investor from the United States. It also appears that the Estonian Government will maintain a share in the ownership of the plant.

Silmet, a former Soviet defense plant, had been in considerable financial difficulty and ended 1996 with losses. The Government at the end of 1996 exempted Silmet from fines and penalties for defaulted tax payments. The Silmet plant depends on Russia for its raw materials.

Ephag stated that there are no immediate plans to change production at Silmet, and that the owners will focus on management and marketing issues. The owners also have to deal with serious environmental problems. A particular concern

is the enterprise's radioactive storage ponds which are separated from the Gulf of Finland by only a retaining wall which requires major reinforcement (U.S. Embassy, 1997; Interfax Mining and Metals Report, 1997).

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### Major Sources of Information

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TABLE 1  
ESTONIA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity	1992	1993	1994	1995	1996
Ammonia, nitrogen content	117,000	115,000	114,000 2/	138,000 2/	130,000
Cement	600,000	500,000	402,000 2/	417,000 2/	400,000
Clays:					
For brick	million cubic meters	100,000	90,000	90,000	90,000
For cement		70,000	60,000	70,000	70,000
Oil shale		15,000,000	15,000,000	14,530,000 2/	13,310,000 2/
Peat		1,500,000	1,300,000	1,274,000 2/	952,200 2/
Sand and gravel	cubic meters	15,000,000	14,000,000	14,000,000	14,000,000
Silica sand, industrial	do.	30,000	25,000	25,000	25,000

1/ Table comprised of estimates based on information available as of Nov. 3, 1997.

2/ Reported figure.

TABLE 2  
ESTONIA: STRUCTURE OF THE MINERAL INDUSTRY FOR 1996

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity e/
Ammonia, nitrogen content	Kohtla-Jarve nitrogenous fertilizer plant	Kohtla-Jarve	NA
Cement	Punane-Kunda plant	Punane-Kunda region	1,500
Limestone, for cement	Punane-Kunda deposits	do.	NA
Oil shale	Estonian associations: includes seven mines, four open pits, and five beneficiation plants	Kohtla-Jarve	25,000
Peat	388 deposits under exploitation	Production in all regions of country, but major facilities in northern and southeastern part of country	6,000
Phosphate rock	Maardu (operation suspended)	Maardu	NA
Sand, for glass	Piiza deposit	Southeastern part of country	50
Sand and gravel cubic meters	Production at more than 700 deposits, largest enterprises: Silikat association exploiting Tallinn deposit	Tallinn region	2,000,000
Do.	Akhtmeskiy industrial materials complex exploiting Panyarve deposit	Panyarve region	1,500,000
Do.	Vyrukivi plant exploiting Abissaare, Koryusmyae, Pyussa-palu deposits	Southeastern part of country	1,500,000
Do.	Tartu construction materials plant exploiting Vooremyagi and Kukemetsa deposits	Tartu region	800,000

e/ Estimated. NA Not available.